

WHAT IS CLAIMED IS:

1. A method for conducting optical proximity correction (OPC) on at least two features in a circuit design, comprising:

detecting a first feature having at least one end thereof to be in the proximity of one end of a second feature;

incorporating a first OPC pattern to the end of the first feature toward a first direction; and

incorporating a second OPC pattern to the end of the second feature toward a second direction that is substantially opposite to the first direction.

2. The method of claim 1 wherein the first and second directions are opposite to each other.

3. The method of claim 1 wherein the first and second OPC patterns are the same.

4. The method of claim 1 wherein the first and second features are substantially linearly aligned.

5. The method of claim 1 wherein the first and second features are substantially parallel to each other.

6. The method of claim 5 wherein an end-to-end space between the first and second features is smaller than 100 nm.

7. The method of claim 1 wherein a line-to-line space between the first and second features is larger than a predetermined design rule.

8. A method for conducting optical proximity correction (OPC) on at least two groups of features in a circuit design, comprising:

detecting a first group of features having their first ends in the proximity of first ends of a second group of features while maintaining a predetermined end-to-end space therebetween;

incorporating a first OPC pattern into the first ends of the features of the first group toward a first direction; and

incorporating a second OPC pattern to the first ends of the features of the second group toward a second direction that is substantially opposite to the first direction.

9. The method of claim 8 wherein the first and second directions are opposite to each other.

10. The method of claim 8 wherein the first and second OPC patterns are the same.

11. The method of claim 8 wherein the first and second features are

substantially linearly aligned.

12. The method of claim 8 wherein the features of the first group are substantially parallel to each other, and the features of the second group are substantially parallel to each other.

13. The method of claim 8 wherein an end-to-end space between the first and second groups of features is smaller than 100 nm.

14. The method of claim 8 wherein a line-to-line space between the features is larger than a predetermined design rule.

15. A method for conducting optical proximity correction (OPC) on at least three features in a circuit design, comprising:

detecting a first feature having at least one end thereof to be in the proximity of ends of a second and third features;

incorporating a first OPC pattern to the end of the first feature;

incorporating a second OPC pattern to the end of the second feature;

incorporating a third OPC pattern to the end of the third feature,

wherein a protruding portion of the first OPC pattern points to a direction that is substantially opposite to directions pointed to by protruding portions of the second and third OPC patterns so that an end-to-end space between any two features can be minimized.

16. The method of claim 15 wherein the protruding portion of the first feature points to a direction opposite to that pointed to by either the protruding portion of the second or third features.

17. The method of claim 15 wherein the first, second, and third OPC patterns are the same.

18. The method of claim 15 wherein the first and second features are substantially linearly aligned and the third feature is parallel to the first and second features.

19. The method of claim 18 wherein the protruding portion of the first feature points to a direction opposite to that pointed to by both the second and third features.

20. The method of claim 18 wherein the protruding portion of the first feature points to a direction opposite to that pointed to by the protruding portion of the second feature and in the same direction as the protruding portion of the third feature.

21. The method of claim 18 wherein an end-to-end space between the first and second features is smaller than 100 nm.